

IUBMB Enzyme Nomenclature

EC 2.7.4.6

Common name: nucleoside-diphosphate kinase

Reaction: ATP + nucleoside diphosphate = ADP + nucleoside triphosphate

Other names: nucleoside 5'-diphosphate kinase; nucleoside diphosphate (UDP) kinase; nucleoside diphosphokinase; nucleotide phosphate kinase; UDP kinase; uridine diphosphate kinase

Systematic name: ATP:nucleoside-diphosphate phosphotransferase

Comments: Many nucleoside diphosphates can act as acceptors, while many ribo- and deoxyribonucleoside triphosphates can act as donors.

Links to other databases: [BRENDA](#), [EXPASY](#), [GTD](#), [KEGG](#), [WIT](#), CAS registry number: 9026-51-1

References:

1. Berg, P. and Joklik, W.K. Enzymatic phosphorylation of nucleoside diphosphates. *J. Biol. Chem.* 210 (1954) 657-672.
2. Gibson, D.M., Ayengar, P. and Sanadi, D.R. Transphosphorylations between nucleoside phosphates. *Biochim. Biophys. Acta* 21 (1956) 86-91.
3. Kirkland, R.J.A. and Turner, J.F. Nucleoside diphosphokinase of pea seeds. *Biochem. J.* 72 (1959) 716-720.
4. Krebs, H.A. and Hems, R. Some reactions of adenosine and inosine phosphates in animal tissues. *Biochim. Biophys. Acta* 12 (1953) 172-180.
5. Nakamura, H. and Sugino, Y. Metabolism of deoxyribonucleotides. 3. Purification and some properties of nucleoside diphosphokinase of calf thymus. *J. Biol. Chem.* 241 (1966) 4917-4922. [Medline UI: [67047591](#)]
6. Ratliff, R.L., Weaver, R.H., Lardy, H.A. and Kuby, S.A. Nucleoside triphosphate-nucleoside diphosphate transphosphorylase (nucleoside diphosphokinase). I. Isolation of the crystalline enzyme from brewers' yeast. *J. Biol. Chem.* 239 (1964) 301-309.

[EC 2.7.4.6 created 1961]

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SEA (NDPK OR NDP (W) KINASE) AND (IDCC OR LABEL)

 1 FILE AGRICOLA
 2 FILE BIOSIS
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 1 FILE GENBANK
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L1 QUE (NDPK OR NDP (W) KINASE) AND (IDCC OR LABEL)

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L2 1 S (NDPK OR NDP (W) KINASE) AND IDCC
 L3 1 S (NDPK OR (NDP (W) KINASE)) AND IDCC
 L4 3380 S (NUCLEOSIDE-DIPHOSPHATE (W) KINASE) OR (NUCLEOSIDE (W) DIPHOS
 L5 1 S L4 AND IDCC
 L6 184 S L4 AND (FLUORESCENT OR FLUORESCENCE)
 L7 1 S L4 (A) (FLUORESCENT OR FLUORESCENCE)
 L8 3556 S (NDP (W) KINASE) OR (NUCLEOSIDE-DIPHOSPHATE (W) KINASE) OR (NU
 L9 197 S L8 AND (IDCC OR DCC OR COUMARIN OR FLUOROPHORE OR FLUORESCEN
 L10 119 DUP REM L9 (78 DUPLICATES REMOVED)
 L11 27 S L8 AND ((MUTATION OR MUTAGENESIS OR SUBSTITUTION) AND TRYPTO
 L12 24 DUP REM L11 (3 DUPLICATES REMOVED)

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